DOCUMENT RESUME

ED 370 241 EA 025 883

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TITLE Reinventing Education. Issue Paper No. 1, Investing in People Project.
INSTITUTION Jobs for the Future, Inc., Cambridge, MA.; National Conference of State Legislatures, Denver, CO.
REPORT NO ISBN-1-55516-341-6
PUB DATE Feb 94
NOTE 46p.
AVAILABLE FROM National Conference of State Legislatures, 1560 Broadway, Suite 700, Denver, CO 80202 (Stock No. 3122, $15; quantity discounts).
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Educational Change; Elementary Secondary Education; *Labor Force Development; *Productivity; School Business Relationship; School Organization; *School Restructuring; *State Action; State Legislation; State Standards
IDENTIFIERS *Global Economy

ABSTRACT

As businesses are remodeling their workplaces into "high-performance work organizations," states must reorganize their education systems to accommodate the changing world of work and to produce citizens able to compete in the global economy. This paper is the first in a series of reports by the Investing in People (IIP) Project, which is funded by the DeWitt Wallace-Reader's Digest Fund. It provides an overview of the issues and concerns surrounding school restructuring and provides examples of state reform efforts when available. Following the preface, acknowledgments, executive summary, and introduction, chapter 1 examines states that are restructuring their entire school systems. Chapter 2 describes various administrative structures, such as school-based management, charter schools, and school choice. The third chapter looks at changing the ways teachers teach, including changes in curriculum, standards, assessment, and instruction methods, as well as a focus on teaching complex thinking skills and meeting minority students' needs. Changes in the way students learn are explored in the fourth chapter, such as class size, multi-age classrooms, school-year length, and alternative schools and programs. Chapter 5 describes the efforts of states at integrating educational and social services. One idea is to coordinate child care, health care, and social services through interagency councils. Chapters 6 and 7 discuss community partnerships and programs for life-long learning, respectively. The final chapter describes the comprehensive education reform legislation passed by Kentucky and Oregon. The appendix contains a list of state contacts. Contains 17 references. (LMI)

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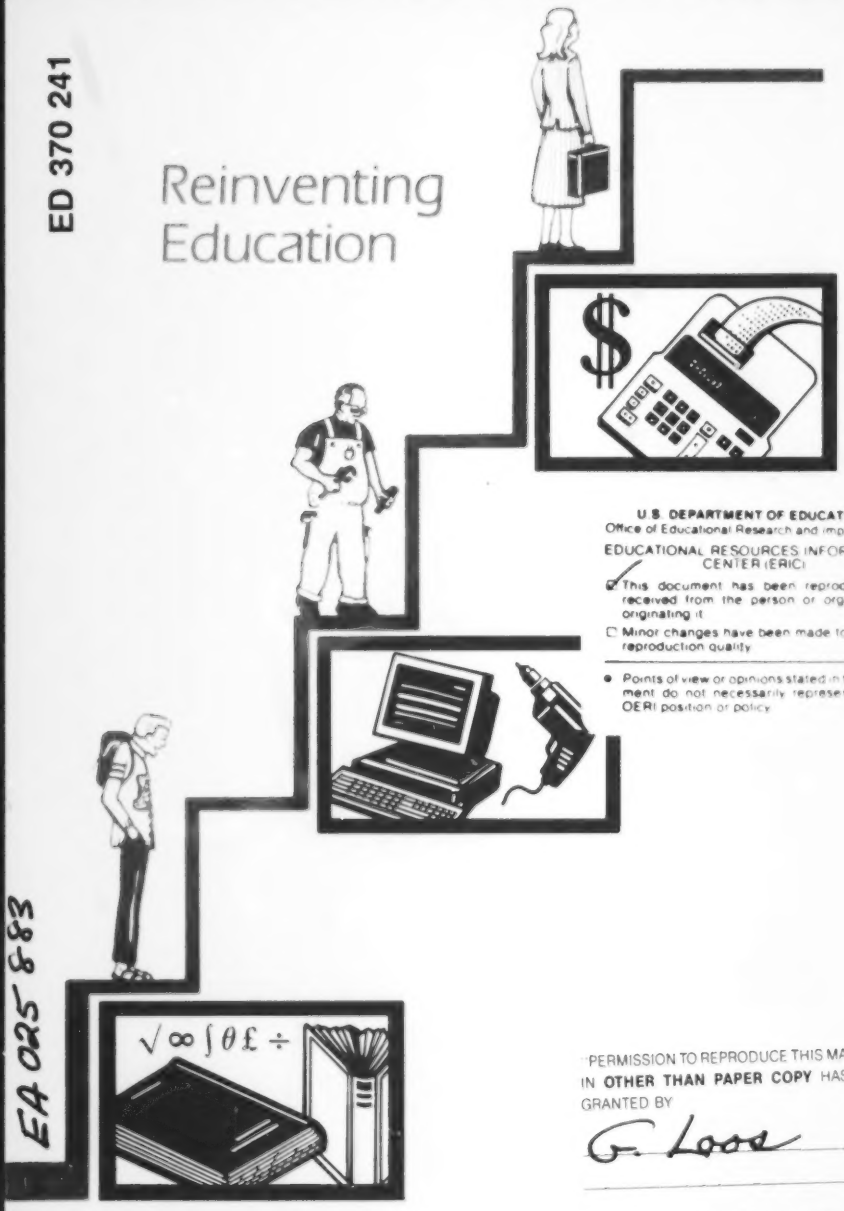

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Reinventing Education

Issue Paper No. 1
Investing in People Project

A joint project of
National Conference of State Legislatures
and
Jobs for the Future

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February 1994

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Printed on recycled paper

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ISBN 1-55516-341-6

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Preface and Acknowledgments

This report is a part of the Investing in People (IIP) Project funded by the DeWitt Wallace-Reader's Digest Fund. The fund's overall goal is to help American youth fulfill their educational and career aspirations. The fund's support and commitment to the IIP project is greatly appreciated.

During this project the National Conference of State Legislatures (NCSL) and Jobs for the Future (JFF) are helping five states—Connecticut, Iowa, Kentucky, Washington, and West Virginia—develop and implement workforce preparation and training strategies to meet the challenge of a competitive global economy. Each state selected teams made up of legislators, legislative staff, business leaders, educators, labor representatives, and other political and civic leaders to help develop and implement long-range strategies that coordinate and improve education, workforce training, and economic development systems. The project includes two policy institutes, extensive technical assistance, and several issue papers. This paper is the first in the series.

A special thanks is due for the time and efforts of Representative Nancy Wyman of Connecticut; Dr. Norman DeMartino, principal of East Haven High School in East Haven, Conn.; and Pam Aschbacher, project director for the National Center for Research on Evaluation, Standards and Student Testing (CRESST) at the University of California at Los Angeles, who acted as outside readers of this report.

Executive Summary

U.S. businesses struggling to stay competitive in today's global economy have begun to turn away from the mass production model of work organization and instead are reorganizing the workplace in a way that will allow firms to compete at the high end of the marketplace. This new model is called the "high performance work organization," among other names. This type of work organization requires highly skilled workers who can learn quickly and put their knowledge to work efficiently and effectively. They become integrated into the planning and accountability structure of the firm and so will need higher levels of education, skills, and social abilities. Workers will need to be able to think critically, learn quickly, make decisions, and work in teams. Many businesses believe that emphasizing workers' capacity to learn faster will be the only sustainable advantage over their competitors. These businesses see themselves as "learning organizations."

As more businesses such as Motorola, Xerox, and the GM-Toyota automobile plant in Fremont, Calif., evolve into the high-performance work organization, this change will have a profound effect on our educational system. If the new businesses of the future are "learning organizations," then states will need to reorganize the education systems to accommodate the changing world of work and instill individual commitment to lifelong learning.

In addition, education is facing many challenges of its own. States are grappling with how to fund schools, meet business demands for highly skilled workers, improve student achievement and prepare students for an increasingly competitive global economy. States are examining every facet of their education systems and considering comprehensive changes. What these changes should be and how to make them has sparked nationwide debate.

Some states are restructuring their entire school system. Many are motivated by the need to reform school finance because of voter initiatives and judicial decisions requiring change. The public is no longer willing to increase taxes for school funding without also considering how the money is being spent.

School restructuring is a comprehensive approach to redesigning the entire school system and is often compared to trying to repair an airplane in flight. A goal of school restructuring is to make education a lifelong learning experience that will serve everyone's needs. This implies a seamless delivery system of education and training services that an individual can easily access over their lifetime. It values workforce skills and seeks to prepare students for the continually evolving demands of the labor market.

Some reforms involved in school restructuring have started with the administrative structures. School-based management, charter schools, and school choice

are examples of changes in the way schools are run. Teacher education has also evolved to include instruction in school administration, integration of social services, new teaching and assessment methods, the increasing incidence of school violence, greater use of community resources, current technology, the workplace and occupations, and a culturally diverse student population. Other reforms have focused on changing the way teachers teach, including changes in curriculum, standards, assessment and instruction methods; more emphasis on complex thinking skills; and attention to minority students.

One of the concepts incorporated in school restructuring is that not all children learn in the same way. To help improve students' learning, schools can make changes in class size, multi-age classrooms, the length of the school year, and alternative schools and programs. There has also been a growing emphasis on the relationship between learning and the job market, with more attention to the students who do not go to college. Programs such as tech-prep, youth apprenticeships, school-based enterprises, career academies, and community service provide opportunities to gain skills and work experience.

Some states are looking at integrating educational and social services in order to better meet the needs of the students and their families. Interagency councils are being developed to seek cooperation among the agencies to address children's social and educational needs. Schools are also providing help with child care and health care.

Partnerships between the schools, families, businesses, and labor also contribute to restructuring schools. Increasing community participation can strengthen the commitment to make schools responsive to student needs.

It is estimated that 80 percent of the American workforce for the year 2000 is already in the labor force. If this figure is correct, it is even more crucial to develop and coordinate adult education and worker training programs. Some states are opening "skill centers" to provide instruction in basic skills, counseling, vocational training and job placement. To meet the demand for highly skilled workers, some businesses are establishing learning centers to enhance the skills of their workers.

The state legislatures are given the task of sifting through these complex issues and passing laws that produce better educated students who are ready to be productive workers in a highly competitive global economy. Two states—Kentucky and Oregon—have taken the lead in restructuring schools by passing comprehensive education reform legislation to address the needs of students and future workers. The legislation includes many of the reforms just mentioned.

Most educators agree that, for the United States to be successful in a globally competitive world, we must revolutionize our educational system. School reforms of the past have been fragmented and have not had much success in improving student achievement. The goal of current school restructuring is to produce students who can become highly skilled and highly paid workers. Our success relies on creating an education system where this can happen. Our economic future depends on it.

Introduction

In a rapidly changing world, many government, corporate, and educational institutions are undergoing major re-examination. U.S. businesses struggling to stay competitive in today's global economy have begun to turn away from the mass production model of work organization and instead are reorganizing the workplace in a way that will allow firms to compete at the high, value-added end of the marketplace. This new model is called the "high-performance work organization," among other names. It is expected to create wealth, increase work opportunities and raise the standard of living. However, this type of work organization requires highly skilled workers who can learn quickly and put their knowledge to work efficiently and effectively.

Some of the key attributes of this new model of work organization are flexibility; decentralized control; innovation; rapid product design, production and delivery; responsiveness to changing consumer tastes; continuous improvement in quality; timeliness; and multi-skilled, educated workers in flexible teams. Because workers are given more responsibility in a high-performance work organization, they must be able to independently use their judgment and make decisions. The workers become integrated into the planning and accountability structure of the firm and so will need higher levels of education, skills, and social abilities. They will need to be able to think critically, learn quickly, and work in teams.

Many businesses believe that emphasizing workers' capacity to learn will be the only sustainable advantage over their competitors. According to Peter Senge in *The Fifth Discipline: The Art and Practice of the Learning Organization*, the "organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and capacity to learn at all levels in an organization." These businesses see themselves as "learning organizations."

Ray Marshall and Marc Tucker express this idea in *Thinking for a Living: Education and the Wealth of Nations*. They write, "The future now belongs to societies that organize themselves for learning. What we know and can do holds the key to economic progress. . . Everything depends on what firms can learn from and teach to their customers and suppliers, on what countries can learn from one another, on what workers can learn from each other and the work that they do, on the learning environment that families provide, and, of course, on what we learn in school."

As more businesses such as Motorola, Xerox and the GM-Toyota automobile plant in Fremont, Calif., evolve into the high-performance work organization, this change will have a profound effect on our educational system. If the new businesses of the future are "learning organizations," then states will need to reorganize the education systems to accommodate the changing world of work

and to instill individual commitment to lifelong learning. More emphasis will also need to be placed on school-to-work transition systems and the 50 percent of students who do not go to college.

The workplace and education systems are being "reinvented" to adapt them to the needs of today's society. States are considering comprehensive changes in their educational systems as a response to low student achievement, the crises in school funding, the demand of business for highly skilled workers, and pressures of a globally competitive economy.

Fundamental changes are being made in school organization, teacher education, curriculum and instruction, the way students learn, the relevance of learning to the job market, the relationship between schools and the community, and the role of education among other societal services, such as health care and social services. All change is difficult, so it is not surprising that the large-scale changes under way in education have generated strong debate.

Although several states have passed legislation that will restructure education, the implementation is phased in over several years and has not been completed. Some of the ideas and programs have been tried in school districts across the country, and many of the results are still being assessed. This report does not provide an in-depth evaluation or complete analysis of each program but instead is intended to give an overview of the many issues and concerns surrounding school restructuring and to provide examples when available.

Restructuring American Schools

A new vision of education, called school restructuring, involves a comprehensive approach to redesigning the entire school system. This is not an easy task; it is often compared to trying to repair an airplane in flight.

Included in the school restructuring concept is the idea that education should be a lifelong learning experience that will serve everyone's educational needs. It implies a seamless delivery system of education and training services, which means a smooth and easy transition between high school, higher education institutions, and the many training programs and services available.

It also involves a philosophy that values workforce skills and seeks to prepare students for the continually evolving demands of the labor market, so workers will be able to contribute in a competitive economy. This new approach to learning recognizes that people learn best by doing, when learning is combined with work experience and has meaning outside of the classroom.

Recently, some states have discussed a total restructuring of the school system, and in some instances have begun to implement it. Legislatures in Oregon, Kentucky, Kansas, South Carolina, Tennessee, and Washington recently adopted comprehensive education reform legislation, but haven't fully implemented the plans yet.

Some states looking at comprehensive education reform

Alabama	Idaho	North Carolina
California	Illinois	Ohio
Colorado	Iowa	Pennsylvania
Florida		

In 1983 the National Commission on Excellence in Education published A Nation at Risk, which detailed the crisis in the American educational system. Soon after that report, state legislatures, as the main source of funding for education, became more involved in education reform.

Education is the largest single item in state budgets, but with student achievement so low, legislators and the public alike began to question whether more money was really solving the problem.

School Finance

Voters in many states have begun to show their dissatisfaction with schools by denying tax increases. The rationale expressed by some is that education reforms alone do not improve equity, quality, and accountability in education, and there-

fore they are reluctant to spend more money on it. In addition, the increasing portion of the population that does not have children is often hesitant to pay more taxes to educate other people's children. The resulting crisis in school finance has often required states to look at restructuring schools in order to more effectively use the public's money.

Most states rely on property taxes to provide the local portion of education funding. Ironically, it is this reliance on property taxes that causes disparities between districts and leads to many of the legal challenges to the equity of school funding systems. The 1990s have also brought a legal focus on adequacy, that is, how much money is needed to educate children. So, in addition to raising revenues to operate schools, states have to be concerned about how equitable and adequate their school finance systems are. A decision by the Kentucky Supreme Court declaring their educational system both inequitable and unconstitutional led to a comprehensive education reform law.

Some states that have faced court action or voter initiatives on school funding		
Alabama	Maryland	Ohio
Alaska	Massachusetts	Oklahoma
Arizona	Michigan	Oregon
California	Minnesota	South Dakota
Colorado	Missouri	Tennessee
Connecticut	Montana	Texas
Georgia	Nebraska	Virginia
Idaho	New Hampshire	Washington
Indiana	New Jersey	West Virginia
Kentucky	New York	Wisconsin
Louisiana	North Dakota	Wyoming

School restructuring is difficult because it involves systemwide reform. Systemic reform means taking a comprehensive, coordinated, and long-term approach to changing the entire educational system. Reforms in the past have generally been fragmented and have not resulted in significantly improved achievement on the part of schools or students. Systemic change is an integrated approach, emphasizing how changes should interact and influence each other.

Systemic change involves fundamentally changing the way schools are run, the way teachers are trained, the way teachers teach, and the way students learn. It also includes integrated services, community partnerships, and lifelong learning.

Changes in the Way Schools Are Run

Restructuring education requires a dramatic shift in the way schools are run, toward a more decentralized system. The new concept of school reform requires schools and teachers, rather than a central district office or local education agency, to have more control over decision making affecting their school. It also involves giving schools rewards for good results and sanctions for poor results. Advocates of this idea say students will learn better when schools are run better and that the teachers, administrators, and parents at the schools know best how to meet the needs of their own students.

Giving the decision-making authority to the schools allows states to hold schools accountable for the results. School-based management, charter schools, and school choice are examples of some of the changes being made in the way schools are run.

School-based Management

In the 1980s many states and school districts began to use decentralized decision-making structures, known as "school-based" or "site-based management." Instead of being made at the central offices of school districts, decisions are made by the principal, teachers, parents, and members of the community. They decide the goals, curriculum, discipline policies, and budget, and they hire personnel.

States and localities using school-based management		
Cambridge, Mass.	Dade County, Fla.	Martin County, Fla.
Chicago, Ill.	Kentucky	New York City, N.Y.
Colorado		
Some other states dealing with school-based management issues		
California	Mississippi	South Carolina
florida	New Hampshire	Tennessee
Iowa	North Carolina	Utah
Illinois	Ohio	Washington
Kansas		

School-based management gives flexibility to those closest to the students, allowing them to design the most appropriate education for students. It is also suggested that making decisions locally fosters within the community a greater sense of ownership and responsibility for the quality of education and increases the accountability of schools.

One of the challenges of this approach is finding people with the interest, time, and expertise to make wise decisions. Opponents also note that this type of group decision making can often be frustrating and sometimes slower than current systems. They also feel these responsibilities take time away from teaching duties and may require additional training.

Charter Schools

In an attempt to facilitate change in the way schools are run, several state legislatures have created what is known as "charter schools." Charter schools allow teachers to sign a charter with their district or other policymaking authority to create their own schools. These schools generally receive waivers from most state regulations and so are free to be more innovative, but in exchange for this flexibility they must show specific student achievement. Charter schools often emphasize some particular learning style or subject specialty, such as a vocational high school or Minnesota's school for the deaf.

Minnesota was the first state to pass a charter schools law in 1991, and California followed in 1992. As a part of its school reform bill, Missouri passed a charter schools pilot project involving three schools. Since the charter school bills are so new, very few charter schools are actually operating yet.

States with charter school laws		
California	Massachusetts	New Mexico
Colorado	Missouri	Wisconsin
Georgia		
States where charter school legislation failed		
Arizona	Wyoming	
Other state legislatures that debated charter school laws		
Alaska	Louisiana	Pennsylvania
Connecticut	Michigan	Tennessee
Florida	New Jersey	Vermont
Indiana		

School Choice

Basically, school choice allows parents to choose which school their children will attend. Although it is a controversial aspect of school reform discussions, many advocates believe that school choice will lead to improved student achievement, increased parental involvement, and greater accountability at the school site. The choice concept is based on the economic market model, that if you give parents educational options, schools that perform poorly will improve or close,

thereby forcing schools to be more responsive to student needs. Many supporters feel that choice, along with flexibility in how schools are run, will result in more effective schools.

Opponents believe that school choice will weaken public schools. They fear that the most advantaged students, and the state money that follows them, will transfer out of poor and urban schools, preventing those schools from providing an adequate education for those remaining. Some school choice programs would create vouchers or tax credits for parents to choose to send their children to private schools.

Some states that have a form of school choice		
Arkansas	Massachusetts	Ohio
Colorado	Minnesota	Utah
Idaho	Nebraska	Washington
Iowa		
Other states considering school choice		
Arizona	New Jersey	Utah
California	New Mexico	Vermont
Florida	Ohio	Washington
New Hampshire	South Carolina	
States where voters recently rejected voucher initiatives		
California	Michigan	Washington, D.C.
Colorado	Oregon	
States that may consider vouchers		
California	New Hampshire	Washington
Idaho	Tennessee	

Changes in the Way Teachers Learn to Teach

Another component of restructuring schools is changing the way teachers learn to teach. To adapt to the changes restructuring will require and to achieve the goal of improved student achievement, teachers will need high-quality training before they begin to teach and during their teaching experience. This may require changes in the way our colleges train teachers and in professional development opportunities.

Teacher Training

Teachers entering the profession out of college are often unprepared for the reality of teaching. The role of the teacher now includes not only teaching, but also helping run the schools, integrating needed social services, learning new teaching and assessment methods, handling increasing school violence, incorporating community resources, and using current technology, among a growing number of other tasks. Teachers must also learn more about the workplace and available occupations, to better advise students about jobs and careers. Teachers will be at the center of school restructuring and will be playing important roles that may require additional training.

Many higher education institutions are having to adapt to these changing demands on teachers by developing courses to more adequately prepare teachers for the reality of today's schools. They are also faced with the need to recruit minority teachers and train teachers to work with a culturally diverse student population. In addition, in order to teach students to develop complex thinking skills and to have a deep understanding of subject matter, teachers themselves must learn more about the content areas and develop new teaching skills.

Professional Development

Professional development provides a way for teachers to keep in touch with innovative programs and new teaching ideas. It gives current teachers a chance to sharpen their skills and focus on their professionalism through in-service training, lectures, projects, workshops, and conferences.

More experienced teachers can mentor new teachers to help build confidence and support. Washington's Teacher Assistance Program helps new and struggling teachers by providing "mentor teachers" to advise them. Washington's program also helps teachers who want to become school principals.

Mentoring is often done in conjunction with "career ladders," which recognize advanced education and excellence in teaching through increased salaries, bonuses, or special recognition. The National Board of Professional Teaching

Standards, created in 1987 to offer voluntary professional certification to teachers, proposes to set national standards for what teachers should know and be able to do and design ways to assess them.

Alternative certification of teachers, which allows specialists in their subject field to teach without completing formal teacher education, is often included in reform discussions. Kentucky incorporated alternative certification standards as a part of its major education reform act.

Changes in the Way Teachers Teach

The demands placed on students after they leave school—as adults, family members, community members, and workers—have changed significantly in the last 20 years. As mentioned in the introduction of this report, in a high performance workplace all workers are encouraged to participate in decision making and are required to plan and organize their work. To do this, they must be able to think critically, synthesize, analyze, conceptualize, solve problems, and work in teams. Creating these kinds of learners, many reformers say, requires changing the way teachers teach, including changes in curriculum, standards, and assessments; changes in instruction methods; more emphasis on complex thinking skills; and attention to minority students.

Curriculum, Standards, and Assessments

As high school graduates enter the workforce, they often find that they are ill equipped to find high wage jobs. They do not have technical skills, and they do not know how to think critically and problem solve in order to apply the knowledge they do have. If the United States is to compete successfully on a global level, teachers must give more attention to the transition from school to work. To ease this transition and to prepare students better, some schools are restructuring their high school curriculum around high expectations for student learning, expressed in explicit standards for what students should know and be able to do. Some reformers believe that schools should involve the business community in establishing standards because business leaders know what skills are needed in the workplace.

Many reformers think standards are the most important element of systemic change, because standards set common goals and reflect a shared vision. The idea is that graduating from high school should mean demonstrating a high level of knowledge and skill instead of just passing a certain number of classes or putting in "seat time." Minnesota's graduation rule, for example, requires students to demonstrate learning outcomes rather than completion of courses based on clock hours.

In this approach, sometimes referred to as "outcomes-based education" or "performance-based education," the curriculum outlines standards for content and performance—standards that establish what the students should know and be able to do. High expectations for student performance emphasize a deep understanding of concepts, complex thinking, and problem solving, instead of memorization and repetition of facts.

Opponents of outcomes-based education, however, believe that school time should be focused on academic knowledge. They are concerned about who will decide the performance standards and how students will be evaluated. They believe performance outcomes teach values, which they feel should be taught at home, not at school. Opposition in Pennsylvania and Oklahoma slowed attempts to develop performance-based education.

After standards are set, methods of assessment are developed that can determine if those standards have been reached. With more accurate and appropriate assessments of what students are learning, schools will be more accountable for student achievement.

Many people interested in reforming education recognize the power of student testing to influence what is taught in schools. They are attempting to change the nature of the tests to encourage students to develop the skills they will need to function successfully in the workforce and in society—skills such as complex thinking, writing, discussion, group collaboration, and applying knowledge in new situations.

Some states using performance assessments		
California	Kentucky	Vermont
Connecticut	Maryland	Washington
States with legislation relating to standards, goals, or outcomes-based education		
Arkansas	Massachusetts	New Hampshire
Colorado	Missouri	North Carolina
Florida	Montana	Pennsylvania
Illinois	Nebraska	Washington
States using outcomes and competencies instead of credit hours		
Minnesota	Oklahoma	Wyoming
Some states that have or are developing a system for setting standards and making assessments		
Arizona	Kentucky	South Carolina
Arkansas	Oregon	Vermont
California	Pennsylvania	Washington
Connecticut		

New kinds of assessments under development—often referred to as "performance assessments" or "alternative assessments"—include portfolios, problem-solving exercises, and hands-on demonstrations. They are meant to reflect more

accurately what students know than do the standardized, norm-referenced multiple choice tests relied on so heavily in the past. Reformers are seeking assessments that give a better picture of how well students are reaching important goals.

Certificate of mastery. Several states are looking at the idea of having students earn a "certificate of initial mastery" by the end of the 10th grade. The certificate means that the student has shown competence in the basic subjects. This often includes common curriculum goals, essential learning skills, and learning outcomes. The student's proficiency in skills and knowledge is cumulative and often includes reading with comprehension; writing and communicating; basic knowledge of math; social, physical, and life sciences, civics, history, geography, arts, and health; analytical and creative thinking, and the ability to work alone and in teams. Students who fail to receive the certificate are provided extra help, alternative educational programs including restructured school days, additional school days, individual instruction, family evaluation with social services, and other alternative instructional practices.

In Oregon, after receiving a certificate of initial mastery, students would go on to receive a "certificate of advanced mastery." Students in 11th and 12th grades choose to follow a course of study that prepares them either for college or for a professional, technical, or vocational career. High school would integrate academic and vocational education with programs such as tech-prep, work-based learning, and vocational-technical education. Students can choose to take professional, technical or vocational courses in broad career fields, often in non-traditional settings, or students can choose a college preparatory curriculum. The program flexibility allows students to move back and forth between career fields, with some students pursuing both college preparatory and a professional-technical endorsement. Schools also provide counseling and job placement assistance to those 11th and 12th grade students who plan to work after graduation from high school.

Both Oregon and Washington have passed legislation setting up a certificate of mastery system. The Kansas legislature recently passed a bill creating a certificate of mastery, but it was vetoed by Governor Joan Finney.

National Education Goals. In 1989, the President and the nation's governors met at an education summit to talk about the need to raise students' educational performance so that the United States can compete successfully in the global economy. Out of that meeting came the six national education goals. The goals, to be met by the year 2000, are:

- Goal 1: All children will start school ready to learn.
- Goal 2: The high school graduation rate will be at least 90 percent.
- Goal 3: All students will be competent in core subjects, prepared for responsi-

ble citizenship, further learning, and productive employment in our modern economy.

- Goal 4: U.S. students will be first in the world in math and science.
- Goal 5: Every adult will be literate and able to compete in a global economy and to exercise the rights and responsibilities of citizenship.
- Goal 6: Every school in America will be safe, disciplined, and drug-free.

The National Education Goals Panel was later formed to report on progress toward these goals. The panel formed the National Council on Education Standards and Testing (NCEST), which recommended that professional associations define clear voluntary national standards for what students should know and be able to do in various subject areas, similar to the student outcomes for math developed by the National Council of Teachers of Mathematics. NCEST also recommended developing "service delivery standards." These standards would describe the adequacy of the learning environment in schools, thereby holding schools more accountable.

Complex Thinking Skills

In a work environment that is constantly changing, today's workers need skills beyond memorization and recall: they must be critical thinkers. It is no longer adequate for workers to learn one skill and then successfully repeat it. The current high-tech, high-performance workplace requires creative thinkers who can analyze, synthesize, evaluate, and solve problems. Better instruction methods can help develop skills in complex thinking.

Discussions of how schools prepare students for the needs of the workplace has led to an examination of what students should learn in order to be successful in a job. In 1991 the Labor Secretary's Commission on Achieving Necessary Skills (SCANS) issued a report on its investigation of what skills high school students should master to be prepared for the workforce. The SCANS report listed five competencies for students: the ability to 1) identify, organize, plan, and allocate resources, 2) work well with others, 3) acquire and use information, 4) understand complex interrelationships, and 5) work with a variety of technologies. This type of skill analysis can help teachers develop more effective methods for training students for the workplace.

If students learn how to learn, they are more adaptable to changing work requirements and evolving jobs. Ray Marshall and Marc Tucker write in *Thinking for a Living: Education and the Wealth of Nations*, "The future now belongs to societies that organize themselves for learning." Many schools are reflecting this increased need for critical thinking by changing their instruction methods.

Instruction Methods

The traditional educational instruction model is one where the teacher talks and the students listen. Two decades of research on learning suggest that students need

to do more than listen in order to learn. They need to use their new knowledge in a variety of ways—in discussions, hands-on experiences, writing, projects, and practical applications. They also need to understand the "big picture" and to see connections within and across subject areas. Reformers are encouraging teachers to involve demanding subject content, include more writing and discussion, use interdisciplinary student projects, and focus on complex thinking skills, such as analyzing, drawing conclusions, making predictions, and evaluating.

Minority Students

The supporters of restructuring have a goal of high achievement for all students, so that all students will become productive and fulfilled citizens. School reformers encourage special attention to the needs of minority students. The needs, backgrounds, and talents of racially and ethnically diverse students, as well as students who do not speak English as their first language, should be considered as teachers change the way they teach. Teachers must learn more about cultural differences and the students' home environments and incorporate this knowledge into the curriculum, their instruction methods, and their interactions with the families.

Changes in the Way Students Learn

One of the concepts incorporated in school restructuring is that not all children learn the same way. Children are individuals who learn at different paces, at different ages, in different circumstances, and through different methods. School restructuring challenges traditional philosophies and assumptions about how students learn. To improve students' learning, schools can make changes with regard to class size, multi-age classrooms, the length of the school year, alternative schools and programs, and the relationship between learning and the job market.

Class Size

Smaller classes allow teachers to give students more individualized attention, which is believed to lead to increased achievement. Decreasing class size means hiring more teachers and using more classrooms, which can be expensive. One alternative is to create small groups of teachers and students who stay together beyond the traditional one-year cycle and engage in a comprehensive teaching program.

Multi-age Classrooms

Children learn at different rates and progress according to their individual needs. Some reformers recommend changes in student grouping such as multi-age classrooms, where students can learn at their own pace and advance when they are ready.

The 1990 Kentucky education reform law requires that all schools establish multi-age, multi-ability K-3 primary units by 1994. Oregon's reform efforts encourage schools to try multi-age (also known as "non-graded") primary programs. Teachers must make sure older children in such groups are sufficiently challenged. Special teacher training may be needed to learn how to teach such a wide range of student abilities and needs.

Length of School Year

The traditional school calendar, with summers off, was established for the farm lifestyle because families needed the children to help harvest the crops. Since our society no longer has this need, many reformers are advocating year-round schools. They say too much knowledge is lost over the summer and continuous instruction is more suited to the way people learn best. More than a million students already attend school year-round.

Some states with year-round schools		
Arizona	Louisiana	North Carolina
California	Michigan	Ohio
Colorado	Minnesota	Oregon
Florida	Missouri	Texas
Hawaii	Nevada	Utah
Idaho	New Jersey	Virginia
Illinois	New Mexico	Washington

Other ideas include lengthening the school year, week, or day. Extending the school day would accommodate the schedule of working parents and might include after-school programs. Lengthening the school week might include Saturday study sessions with tutoring or other activities. However, an increase of school time may also mean an increase in expenditures.

Alternative Schools and Programs

It is estimated that more than 20 percent of students drop out of high school, but in inner city schools it can be double that number. Schools can develop alternative schools and programs to meet the needs of students at risk of dropping out of school.

Mentoring, by adults or older students, can be used to help kids stay in school. It provides one-on-one tutoring and overall support for the student. Mentoring helps motivate learning, encourages interest in job and career choices, improves academic and social skills, and helps prevent students from dropping out of school.

Alternative schools often provide a different kind of structure for kids who don't thrive in a traditional school setting and allows greater personal attention that can help increase student achievement. Alternative schools across the country have provided flexible class scheduling, GED programs, night school, self-paced instruction, day care for teen parents, smaller classes, evaluations based on learning outcomes, and many other innovations.

Examples of mentoring programs	
HOSTS (Washington)	Project Pass (Ohio)
Linking Lifetimes (Pennsylvania)	StarMaker (Florida)

The Relevance of Learning to the Job Market

As the last century changed our farm society into an industrial one, schools also changed from one-room schoolhouses to large school systems. Now society has moved into a knowledge-based global economy, and new school systems are needed.

When today's students graduate, they will have demanding jobs that require the ability to apply knowledge to new situations and make complex decisions. The only way to maintain our standard of living is to increase the productivity of workers. This requires businesses to be organized to allow decision making by front-line workers. In order for our workers to have the necessary skills to function in these "high-performance work organizations," our high schools need to prepare students for these types of jobs. Countries such as Japan, Germany, Singapore, and Sweden are already committed to policies that advance these concepts. It is estimated that 70 percent of the jobs in the year 2000 will not require a four-year degree. Yet, American schools focus most of their attention on the 50 percent of students who go to college, although only 25 percent actually complete a degree.

Many reformers believe students learn best by doing. Programs that combine outside practical work experience with relevant classroom lessons can enhance learning and help the school-to-work transition. Some programs that relate learning to job skills are "tech-prep" programs, youth apprenticeships, school-based enterprises, career academies, and community service.

Many European countries have helped shape our school-to-work transition policies based on their history of successful programs and on the many visits to Europe by American educators and policymakers to see how their programs work.

States with legislation relating to the school-to-work transition		
Florida	Tennessee	Wisconsin
Oregon		
Some other states considering school-to-work laws		
Arkansas	Minnesota	New YorK
California	New Jersey	Washington
Michigan		

Tech-prep. Technical preparation, often referred to as "tech-prep" or "2+2," is a program that coordinates the last two years of high school with two years at a community college, resulting in a certificate or associate degree. This type of program was designed for students who want jobs that require skills beyond high school, but not necessarily a four-year degree.

A tech-prep program consists of strong career counseling beginning in the 11th grade, school-college collaboration, committees made up of both school and community college officials, applied academics in basic subject areas, increased technical training, and strong business involvement. Many reformers feel that businesses should be involved in determining the structure of tech-prep programs

and identifying workplace needs.

In 1987 the Indiana legislature created a task force to develop a tech-prep curriculum model, which was implemented in 1991. In Washington state, the Boeing Company, in partnership with schools in the area, developed a tech-prep and applied academics program. Maryland also has two tech-prep initiatives that are part of a strategy of the Maryland Department of Economic and Employment Development to connect school and work across the state.

At the national level, the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 created increased interest in tech-prep education when it made federal grants available to states to develop these programs.

States with tech-prep programs		
Indiana	Michigan	Washington
Maryland	Rhode Island	

Youth apprenticeships. Most apprenticeship programs in the United States are not aimed at young students but instead provide training for adults who are already employed. In 1989 only 300,000 people were involved in apprenticeships in the United States. Most of these were union-sponsored registered apprenticeships in the construction industry or in large-scale manufacturing. The average age of participants was 27.

The United States is far behind other European countries, most notably Germany, in providing large-scale opportunities for high school students to participate in apprenticeships. In 1989, only 3,500 students participated in youth apprenticeships that involved a school-to-work program for 16 to 18 year olds. In contrast, 1.7 million young people are using apprenticeships in Germany to earn formal certification and start a career in 400 different occupations. German students contract on their own for training with the employer. Eighty percent of the cost of the apprenticeship is picked up by the employer. The German student spends four days a week learning a trade on the job and one day a week in classes.

Apprenticeships are organized training programs that combine classroom instruction with on-the-job training. In the United States, unlike Europe, the education and training role of apprenticeships is more closely tied to the schools than to the employer. Schools are beginning to revise the curriculum in order to combine academics with apprenticeships for high school students who don't go to college.

Oregon created a statewide youth apprenticeship program for high school students who don't plan on going to college; it will be in place by 1997. Maine will also offer three-year apprenticeships for its public high schools by 1996.

Some states with youth apprenticeship programs		
Alabama	Georgia	Oregon
Arkansas	Maine	Pennsylvania
Connecticut	New Jersey	Virginia
Illinois	Ohio	Wisconsin

School-based enterprises. Another program that helps students discover the benefits of work is the school-based enterprise. In this program, middle school and high school students plan, create, and run a business. The students learn how to analyze the business needs of their community, develop a business plan, obtain financing and run their businesses, such as retail shops, bicycle repair shops, or child care facilities. The "Way Off Broadway Deli," a restaurant created by students in North Carolina, is one successful example .

Some states with schools offering school-based enterprises		
Arkansas	Georgia	North Carolina

Career academies. Career academies are schools-within-schools that allow students to train in an occupational field while also preparing for college. The approximately 150 career academies nationwide combine academic coursework and skills-training. Partnerships between schools and employers are very important because career academies usually offer summer jobs for students after 11th grade and part-time jobs during their 12th grade.

Sometimes several teachers team-teach in math, English, science, and the career subjects, staying with the students for several years. The students take all their other classes within the regular high school program. Some Philadelphia students are learning health care skills, while students in San Francisco are learning the banking industry through career academies.

Community service. Many schools have offered community service as another opportunity to learn and strengthen the connection between school and work. Supporters say community service helps build confidence and self-esteem, teaches responsibility, helps link classroom learning to real life, provides job training, exposes students to different types of work, and helps students appreciate their community. In some school districts community service is a requirement for graduation. In Maryland, a Board of Education requirement mandates all high school seniors must have 75 hours of community service in order to graduate. Many colleges also provide opportunities for their students to participate in community service.

Conservation corps and service corps programs also offer educational and work opportunities with compensation. Students work on public works projects

that benefit the state or community. Federal Job Training Partnership Act funds are often used for funding these service corps programs.

Some states with community service legislation		
California	Florida	Pennsylvania
Connecticut	Illinois	Washington
District of Columbia	Minnesota	
Some states with laws allowing schools to offer credits for community service		
Ohio	Minnesota	Wisconsin
Oklahoma		

Integrating Services

Many problems that prevent children from being successful in school have nothing to do with what is going on at school. Instead it is a result of what is happening at home and in the neighborhood. Many children have such severe child care, health, and social problems at home that learning at school becomes almost impossible. Because school is a focal point in children's lives, integrating educational and social services as "children's services" may be the solution for meeting the needs of the students and their families.

Interagency Councils

One idea is to coordinate state policy through interagency councils that seek cooperation among the agencies to address children's social and educational needs. A New Jersey program provides coordinated services through a "one-stop shopping" approach, offering counseling, health services, and employment referrals in or near public schools. Oregon and Massachusetts have also developed interagency programs.

Some states with interagency programs		
Massachusetts	New Jersey	Oregon

Child Care

Quality child care has become a major concern as more single parents and families with two working parents need day care for their younger children and safe places for their children before and after school. Schools may step in to provide these services. Several states have pooled their financial resources to offer child care and early childhood education. Virginia has developed a council in charge of planning, coordinating, and evaluating all programs involving schools and community institutions dealing with day care and early childhood programs. Wisconsin established a commission that recommends better coordination of schools and service agencies to provide early childhood care and education. Oregon has extended preschool hours and offers before-and after-school care.

Some states with school child care programs		
Oregon	Virginia	Wisconsin

Health Care

Poverty and inadequate health care often lead to health problems for children. Lack of prenatal care for low-income women and maternal substance abuse also

bring children to school with health problems. Children in poor health often have trouble learning and have more absences from school. Programs in schools sometimes provide immunizations for measles, rubella, and mumps either free or at a reduced cost. Health programs based in the schools could be an effective way to meet the health needs of children.

Social Services

Social services for children, mental health services, and protection from abuse sometimes do not reach the ones who need it the most. Adolescents are faced with the issues of suicide, drug and alcohol abuse, teen pregnancy, violence, sexual abuse, and other problems that could be better addressed by integrating services with schools.

Kentucky's new school reform act created family resource centers that will offer health and social services for students and their families. Iowa also developed a program that provides funds for school-based youth services at middle or high schools that have a high incidence of teen pregnancy, juvenile delinquency, substance abuse, and mental illness. The program's goals are to reduce the incidence of these teen problems and encourage joint planning by community agencies to coordinate activities and make the best use of community resources. The program requires that job training, employment, mental health, family counseling, and primary health care services be provided in or near the schools.

Examples of states with school-based social services	
Iowa	Kentucky

Community Partnerships

Partnerships between the schools, families, businesses, and labor also contribute to restructuring schools. Increasing community participation can strengthen the commitment to make schools responsive to student needs.

Parents

More parental involvement in children's education improves student achievement and bolsters public understanding of and support for education. Parents are the children's first and most influential teachers. During their first 18 years, children spend approximately 13 percent of their time in school, but 87 percent of their time will be outside of school with their families. So it is important that parents work closely with schools to help children become successful learners.

Through parental involvement at school, teachers can help respect the diversity of families, understand cultural differences, and find ways to involve low-income and non-English- speaking parents. Many teacher education programs are beginning to address these issues.

Many reformers feel parental involvement in children's education should begin as soon as the child is born. A statewide program in Missouri called "Parents as Teachers" promotes parental involvement through a home-school partnership for children from birth to kindergarten. Certified parent educators visit the family's home to provide support and guidance. The program helps parents understand a child's development and teaches ways to encourage learning. It also helps link families with needed social services and offers development, language, hearing, and vision screenings.

Business and Labor

Business and labor involvement in schools creates a communitywide commitment to excellence in education and helps encourage the interaction that is necessary to create the seamless web of education and training needed to fill jobs with highly skilled workers. Businesses not only contribute their financial resources, they also give their time and expertise to schools and to the issues of education.

In Kentucky, the reform act encourages community cooperation. Three corporations (Humana, Ashland Oil, and UPS) from the Business Roundtable, a group of the top 200 companies in the nation, chose Kentucky for a 10-year business commitment to education reform. They helped create a 60-member "Partnership for Kentucky School Reform" made up of businesses, community

leaders, parents, teachers, and legislators to help Kentucky implement the reforms of their 1990 education reform act.

Minnesota is often looked to as a model for partnerships between businesses and schools. In 1983 the state legislature created the Minnesota Academic Excellence Foundation, which pairs businesses with K-12 programs. Many businesses across the country also participate in an adopt-a-school program, where businesses give special support to one school.

Apprenticeships, tech-prep, school-based enterprises, and many other programs need the commitment and participation of community businesses and labor in order to be successful. Businesses contribute to the apprenticeship programs by paying wages and providing training for the apprentice. Under the Arkansas youth apprenticeship legislation, business is also heavily involved in designing and implementing the program.

Some states with strong business and labor involvement in education		
Arizona	Kentucky	Ohio
Arkansas	Minnesota	South Carolina

Lifelong Learning

It is estimated that 80 percent of the American workforce for the year 2000 is already in the labor force. If this figure is correct, it is even more crucial to develop and coordinate adult education and worker training programs.

Drastic changes in the 1980s brought many developments to the workplace including computers; product diversification; global competitiveness; older, more diverse workers; and reorganized workplaces. Workers must update their skills by continuing to learn through education and training programs. In Germany many of these programs are run by business or by government, with cooperation from their labor unions. In the United States we have some good training programs, but too few of them.

It has been estimated that at least 17 million workers need remedial education in reading, writing, and math. A 1993 study released by the U.S. Department of Education reports that nearly half of all Americans can not read, write, and calculate well enough to function successfully in society. Many states such as Indiana, New York, and Oregon are opening "skill centers" to provide instruction in basic skills, counseling, vocational training, and job placement. To meet the demand for highly skilled workers, some businesses are establishing learning centers to enhance the skills of their employees. The Michelin Tire Corporation in South Carolina is one example.

Literacy is essential not only in getting a job, but in being able to adapt to changing technology to keep a job. Pennsylvania addressed this problem when it enacted the Adult Literacy Act, which is targeted to those adults who are functioning below a fifth grade reading level. In Illinois, the legislature passed the Workplace Literacy Act, which gives money for workplace programs in literacy and basic skills education.

Some states with literacy programs		
Hawaii	Louisiana	Pennsylvania
Illinois		

State Responses to School Restructuring

Many states believe that our country is still a "nation at risk" and consequently will be unable to compete in the global economy because of poor student academic achievement. Two states that have taken the lead in restructuring schools, Kentucky and Oregon, passed comprehensive education reform legislation to address the needs of students and future workers. In addition, legislatures in Kansas, South Carolina, Tennessee and Washington recently adopted comprehensive education reform legislation.

Kentucky

In response to a court decision by the Kentucky Supreme Court declaring the state's educational system both inequitable and unconstitutional, the state legislature passed the 1990 Kentucky Education Reform Act. The act completely redesigned their educational system.

The Kentucky act created school-based management and holds the school districts accountable for their performance. It established local school councils, made up of teachers, parents, and principals, which are responsible for all major curriculum and finance decisions.

Local schools were given control over curriculum design, to be guided by a state curriculum framework tied to mandated student outcomes. Students in grades four, eight, and 12 will be tested under a new performance-based assessment system. Report cards will be issued describing the success of each school.

The results of student outcomes and other factors will be used to determine whether a school has achieved the six statewide education goals set out by the reform act. These goals are high expectations, student preparedness for adulthood, regular attendance, lower dropout rates, fewer health barriers to learning, and successful transition to work or postsecondary education. Successfully meeting these goals can mean additional funding for schools.

The court ordered the state to improve educational equity through a new school funding formula that helps school districts achieve parity. The reform law also increased basic school funding by 20 percent.

The reform law created preschool programs for at-risk and disabled children. It also started multi-age and multi-ability classrooms where students learn in an innovative "continuous progress" group. Schools can extend the school year, day, or week to meet the mandated outcomes.

The reform act established family resource centers that will offer health and social services for students and their families. It also sets up regional service centers for the professional development of teachers and administrators.

A computer network was set up that links the school districts, student and teacher workstations, higher education institutions, libraries, public television, and the State Department of Education.

Kentucky's school reforms are now being implemented.

Oregon

In 1991 the Oregon legislature took on the complicated task of trying to restructure the state's education and training systems. The **Educational Act for the 21st Century** reformed Oregon's school system. Some provisions of this bill are fully funding Head Start; requiring a certificate of initial mastery for all students by 10th grade and a certificate of advanced mastery by the 12th grade; creating learning centers for dropouts up to age 21 to help them complete the certificate of initial mastery; lengthening the school year; reforming the curriculum; assessing student performance; and increasing parental involvement. Oregon's education reform, to be phased in over several years, has been slowed by the state's budgetary shortfalls.

Another bill created the **Oregon Workforce Quality Council,** which brings together private sector representatives and key state agency decision makers to create policies to build a more integrated delivery system. This system coordinates students, resources, and providers of education, training, and job placement opportunities. The Workforce Quality Council oversees reforms of performance standards, alternative learning centers, youth apprenticeship programs, community college technical certificates and degrees, and programs funded by federal workforce training and education money.

The **Oregon Workforce 2000** bill, earmarks millions of dollars of lottery revenue to help promote targeted education and job training programs.

Oregon created the **Oregon Progress Board,** which is an independent state planning and oversight agency. Its mandate is to measure the state's performance and hold the state accountable for reaching its economic and workforce goals. Using as a framework the 1989 report *Oregon Shines: An Economic Strategy for the Pacific Century*, the board released *Oregon Benchmarks: Setting Measurable Standards for Progress*, which established criteria for measuring progress toward their goals. The two types of benchmarks are "lead" benchmarks, which relate to urgent conditions that require improvement within the next five years, and "key" benchmarks, which measure success on Oregon's long-term objectives. The benchmarks guide state priorities and long-term planning.

Conclusion

Most educators agree that for the United States to be successful in a globally competitive world we must change our educational system. Which changes legislatures chose sparks the debate about restructuring schools.

Comprehensive changes are never easy and should be considered carefully. States are structured differently and have their own educational history and unique challenges. However, many states share common problems. Financial resources can be scarce, and there is often a struggle to meet competing needs. State legislatures are taking greater control of school reforms, sometimes forced by court order, which may cause conflict with those who feel the schools should be making educational decisions instead of the legislatures.

Reforms in the past have been fragmented and have not had much success in improving student achievement. To create successful programs and to have the support needed to undertake a task as large and complex as restructuring schools, reformers will need the cooperation of educators, parents, community leaders, business, labor, and policymakers.

The hope for restructuring schools is that its comprehensive, coordinated, and long-term approach to redesigning the entire school system will bring about the changes and the support system needed to propel our schools into the 21st century. The goal is to have students who can become highly skilled and highly paid workers. Success relies on creating an education system where this can happen. Our economic future depends it.

Appendix

State Contacts List

Alabama
Office of Superintendent of Education
Montgomery, Alabama
(205) 242-9700

Legislative Offices (205) 242-2500

Alaska
Office of the Commissioner of Education
Juneau, Alaska (907) 465-2800

Legislative Offices (907) 465-2111

Arizona
Office of the Superintendent of Education
Phoenix, Arizona (602) 542-4361

Legislative Offices (602) 542-4900

Arkansas
Office of the Director of Education
Little Rock, Arkansas
(501) 682-4204

Legislative Offices (501) 682-1010

California
Office of the Superintendent of Education
Sacramento, California
(916) 657-5485

Legislative Offices (916) 322-9900

Colorado
Office of the Commissioner of Education
Denver, Colorado (303) 866-6600

Legislative Offices (303) 866-5000

Connecticut
Office of the Commissioner of Education
Hartford, Connecticut
(203) 566-5061

Legislative Offices (203) 240-0100

Delaware
Office of the Superintendent
Dover, Delaware (302) 739-4601

Legislative Offices (302) 739-4000

District of Columbia
Office of Superintendent
Washington, D.C. (202) 724-4222

Council Offices (202) 724-8000

Florida
Office of the Commissioner of Education
Tallahassee, Florida (904) 487-1785

Legislative Offices (904) 488-1234

Georgia
Office of the State Superintendent of Education
Atlanta, Georgia (404) 656-2800

Legislative Offices (404) 656-2000

Hawaii
Office of the Superintendent of Education
Honolulu, Hawaii (808) 586-3310

Legislative Offices (808) 586-2211

Idaho
Office of the Superintendent of Education
Boise, Idaho (208) 334-3300

Legislative Offices (208) 334-2411

Illinois
Office of the Superintendent of Education
Springfield, Illinois (217) 782-2221

Legislative Offices (217) 782-2000

Indiana
Office of the Superintendent of Education
Indianapolis, Indiana (317) 232-6665

Legislative Offices (317) 232-3140

Iowa
Office of the Director of Education
Des Moines, Iowa (515) 281-5294

Legislative Offices (515) 281-5011

Kansas
Office of the Commissioner of Education
Topeka, Kansas (913) 296-3202

Legislative Offices (913) 296-0111

Kentucky
Office of the Commissioner of Education
Frankfort, Kentucky (502) 564-4770

Legislative Offices (502) 564-8100

Louisiana
Office of the Superintendent of Education
Baton Rouge, Louisiana (504) 342-3602

Legislative Offices (504) 342-6600

Maine
Office of the Commissioner of Education
Augusta, Maine (207) 289-5800

Legislative Offices (207) 289-1110

Maryland
Office of the Commissioner of Education
Baltimore, Maryland (410) 333-2200

Legislative Offices (301) 858-3000

Massachusetts
Office of the Commissioner of Education
Quincy, Massachusetts
(617) 770-7321

Legislative Offices (617) 727-2121

Michigan
Office of the Superintendent of Education
Lansing, Michigan (517) 373-3354

Legislative Offices (517) 373-1837

Minnesota
Office of the Commissioner of Education
St. Paul, Minnesota (612) 296-2358

Legislative Offices (612) 296-6013

Mississippi
Office of the Superintendent of Education
Jackson, Mississippi (601) 359-3513

Legislative Offices (601) 359-1000

Missouri
Office of the Commissioner of Education
Jefferson City, Missouri
(314) 751-4446

Legislative Offices (314) 751-2151

Montana
Office of Public Instruction
Helena, Montana (406) 444-3680

Legislative Offices (406) 444-4800

Nebraska
Office of the Commissioner of Education
Lincoln, Nebraska (402) 471-5020

Legislative Offices (402) 471-2311

Nevada
Office of Superintendent of Education
Carson City, Nevada (702) 687-3100

Legislative Offices (702) 687-6800

New Hampshire
Office of the Commissioner of Education
Concord, New Hampshire
(603) 271-3144

Legislative Offices (603) 271-1110

New Jersey
Office of the Commissioner of Education
Trenton, New Jersey (609) 292-4450

Legislative Offices (609) 292-4840

New Mexico
Office of the Superintendent of Education
Santa Fe, New Mexico
(505) 827-6516

Legislative Offices (505) 986-4300

New York
Office of the Commissioner of Education
Albany, New York (518) 474-5844

Legislative Offices (518) 474-2121

North Carolina
Office of the Superintendent of Public Instruction
Raleigh, North Carolina (919) 733-3813

Legislative Offices (919) 733-1110

North Dakota
Office of the Superintendent of Public Instruction
Bismarck, North Dakota (701) 224-2261

Legislative Offices (701) 224-2000

Ohio
Office of Superintendent of Education
Columbus, Ohio (614) 466-3304

Legislative Offices (614) 466-2000

Oklahoma
Office of the Superintendent of Education
Oklahoma City, Oklahoma (405) 521-3301

Legislative Offices (405) 521-2011

Oregon
Office of the Superintendent of Education
Salem, Oregon (503) 378-3573

Legislative Offices (503) 378-8551

Pennsylvania
Office of the Secretary of Education
Harrisburg, Pennsylvania (717) 787-5820

Legislative Offices (717) 787-2121

Rhode Island
Office of the Commissioner of Education
Providence, Rhode Island (401) 277-2031

Legislative Offices (401) 277-2000

South Carolina
Office of the Superintendent of Education
Columbia, South Carolina (803) 734-8492

Legislative Offices (803) 734-1000

South Dakota
Division of the Secretary of Education
Pierre, South Dakota (605) 773-3134

Legislative Offices (605) 773-3011

Tennessee
Office of the Commissioner of Education
Nashville, Tennessee (615) 741-2731

Legislative Offices (615) 741-3011

Texas
Office of the Commissioner of Education
Austin, Texas (512) 463-8985

Legislative Offices (512) 463-4630

Utah
Office of the Superintendent of Education
Salt Lake City, Utah (801) 538-7510

Legislative Offices (801) 538-4000

Vermont
Office of the Commissioner of Education
Montpelier, Vermont (802) 828-3135

Legislative Offices (802) 828-1110

Virginia
Office of the Superintendent of Education
Richmond, Virginia (804) 225-2755

Legislative Offices (804) 786-0000

Washington
Office of the Superintendent of Education
Olympia, Washington (206) 586-6904

Legislative Offices (206) 786-7550

West Virginia
Office of the Superintendent of Education
Charleston, West Virginia (304) 348-2681

Legislative Offices (304) 348-3456

Wisconsin
Office of the Superintendent of Public Instruction
Madison, Wisconsin (608) 266-1771

Legislative Offices (608) 266-2211

Wyoming
Office of the Superintendent of Education
Cheyenne, Wyoming (307) 777-7675

Legislative Offices (307) 777-7220

Recommended Reading

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Reinventing Education

An Issue Paper of the Investing in People Project

To succeed in the global marketplace, today's high-performance work organizations require employees who can learn quickly, think critically, make decisions, and work in teams. This economic reality gives more impetus to states to restructure education to ensure that it prepares students for the new demands they face and allows individuals to continually develop their knowledge and skills throughout their lives.

This report reviews the many ambitious effort under way in the states to reform education, explains the most popular approaches, and offers examples of specific programs. Reforms include changes in how schools are run, how teachers teach and how they learn to teach, and how students learn. There's new emphasis on integrated services and partnerships with businesses and the community. Although many past reforms have been fragmented, our nation's success may depend on these comprehensive changes, on essentially reinventing education.

ISBN 1-55516-341-6

Item #3122

Price: $15.00

National Conference of State Legislatures

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